SAFETY SUPPLEMENT

TECHNICAL MANUAL

AEROSPACE EMERGENCY RESCUE AND MISHAP RESPONSE INFORMATION (EMERGENCY SERVICES)

THIS PUBLICATION SUPPLEMENTS TO 00-105E-9 REVISION 8, DATED 30 SEPTEMBER 2002, LOCATED AT WEB SITE:**http://www.robins.af.mil/ti/tilta/documents/to00-105E-9.htm**.

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6 FEBRUARY 2003

1. PURPOSE.

This supplement provides instructions for update of TO 00-105E-9 Revision 8, dated 30 September 2002, affecting Chapter 11 USAF Trainer Aircraft. This update adds new information regarding the DA20-C1 Falcon, the Air Force Academy leased aircraft procedures with information regarding associated hazards.

2. INSTRUCTIONS.

a. This information, if it applies to your operation, can be downloaded and printed from this web site by the end user. Use the most current Adobe Reader for this function. This software is free and can be downloaded from Adobe.com at their web site. PDF files should be downloaded with the Reader running on your PC to reduce download time.

b. This supplement to Chapter 11 adds information based on newly researched source data information regarding the DA20-C1. The new update should be added to Chapter 11 in TO 00-105E-9 Revison 8. The end user should save this file and print the affected pages, if applicable to the user's operation. File a copy of this Safety Supplement with the main Technical Order according to current regulations.

NOTE

The operational user file is the whole or selected printed pages from the web site placed in a binder used for local, transient operations or both. This information should also be included in mobility boxes where applicable. If your unit or a part of your unit is serving elsewhere, they should be informed of this Safety Supplement and how to obtain it. See TO 00-5-2 paragraphs 1-1.4,1-1.4.1, and 1-1.6 for Local Reproduction of TOs and Digital Media guidance.

THE END


N918AF


U.S. AIR FORCE ACADEMY

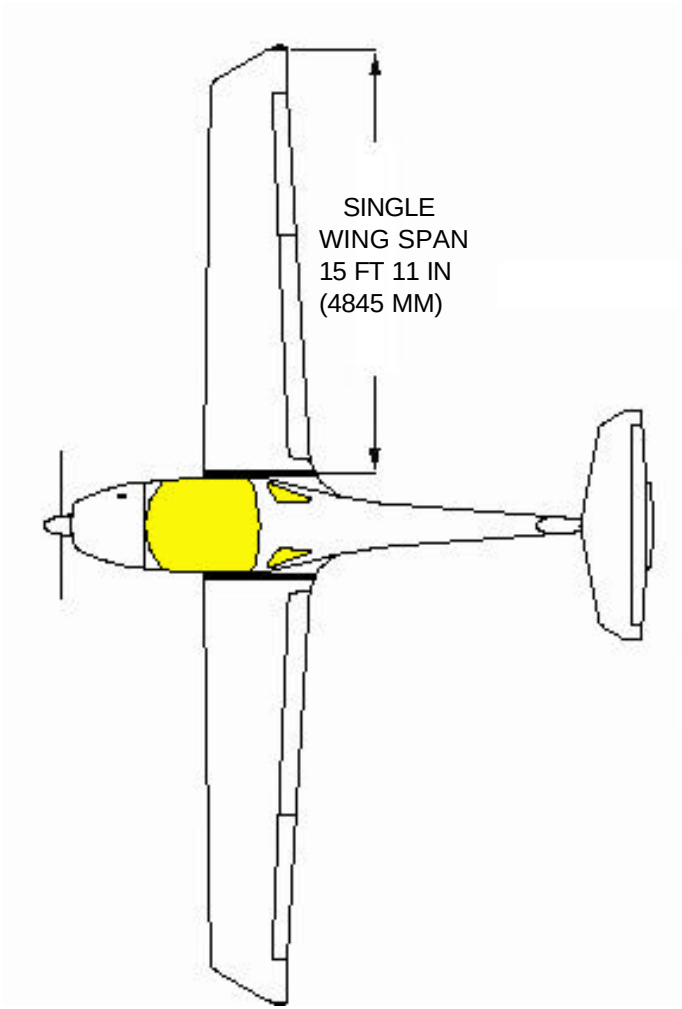

N920AF
N922AF
U.S. AIR FORCE ACADEMY

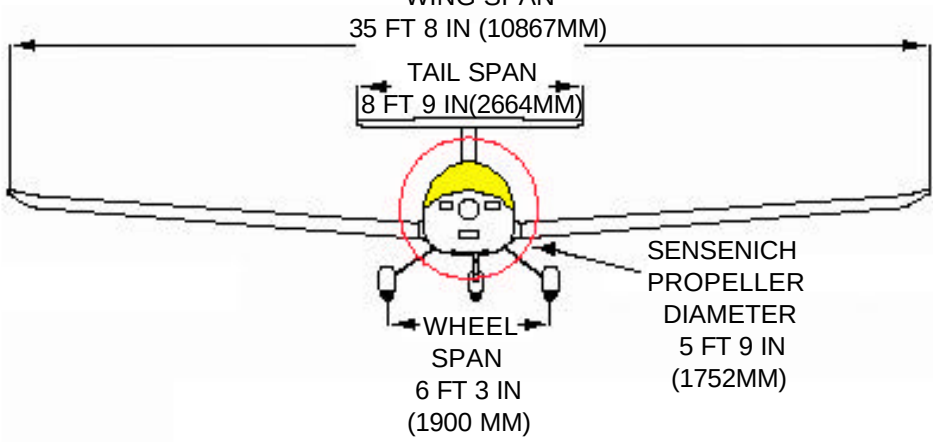
AIRCRAFT DIMENSIONS

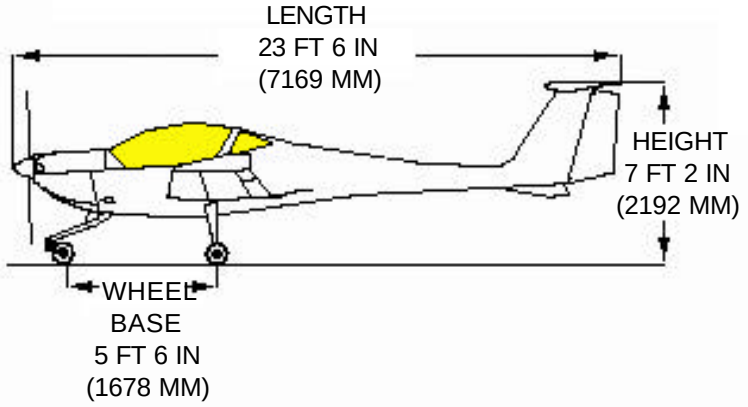
NOTE:

Dimensions are approximate - for reference only.

Dimensions are Feet - Inches (MM).







GENERAL INFORMATION

The DA20-C1 Falcon will replace the retired T-3A Firefly trainer aircraft and be used to train students at the Air Force Academy. The European designation is the DV 20.

The DA20-C1 is a two seat aircraft designed and manufactured by Diamond Aircraft Industries of London, Ontario Canada. It is principally intended for primary flight training. The DA20-C1 features advanced composite structure, single engine, conventional configuration with low wing and T-tail, and tricycle landing gear. The flight crew of 2 are seated in a side-by-side arrangement.

The fuselage is contructed of Glass Reinforced Plastic (GRP) with local Carbon Reinforced Plastic (CRP) reinforcement in local high stress areas.

AIRFRAME MATERIALS
The fixed seat shells are of GRP construction.

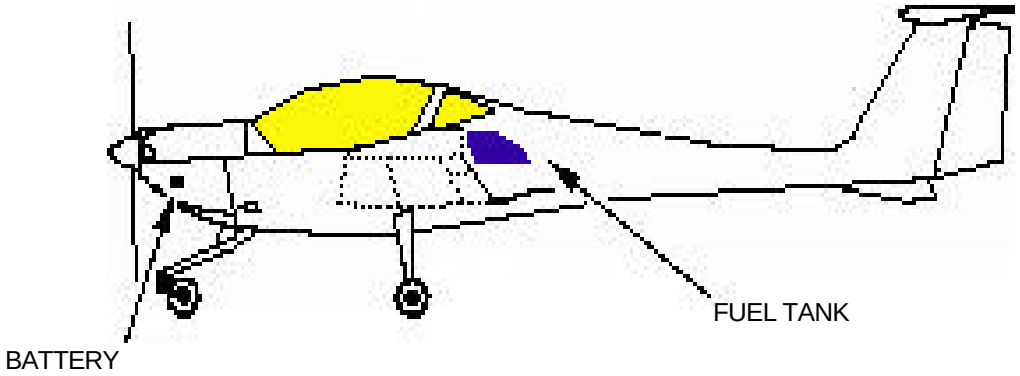
The GRP firewall is clad with Fiberfrax insulating material with a stainless steel skin. Engine cowlings are fire protected by fire resistant paint.

The wing skins are of GRP/FOAM/GRP sandwich construction. The I section spar is constructed of CRP poltruded spar caps that are joined with a GRP/FOAM sandwich construction spar web.

The rudder halves are of GRP/FOAM/GRP sandwich construction. The horizontal stabilizer and elevator are GRP/FOAM/GRP sandwich construction with local CRP reinforcement.

The propellor blades are of wood core construction with composite skins and aluminum or polycarbonate bonded edge inserts.

ELECTRICAL SYSTEM
Electrical power is circuit protected by panel mounted circuit breakers for each circuit. The system is 12 volt.



FUEL SYSTEM
The aluminum 20.5 US gallon fuel tank is located aft of the occupants and below the baggage compartment floor. The engine runs on 100LL aviation fuel.

PROPULSION SYSTEM
The engine is a Teledyne Continental Motors IO-240 B3B. The engine cycle with 4 horizontally opposed cylinders.

OIL SYSTEM
Aircraft piston engine oil with a 6 US quart capacity.

BATTERY LOCATION
The battery is located in the firewall, under the engine cowling. Battery is 20 A/hr.

Additional information for the DA20-C1 may be found by referring to the FAA Type Certificate No. TA4CH.

SPECIAL TOOLS/EQUIPMENT
Power Rescue Saw
Fire Drill II

AIRCRAFT ENTRY

1. NORMAL AND EMERGENCY ENTRY

NOTE:
There is no canopy jettison/fracture feature for this aircraft.

a. The canopy is unlatched by rotating unlock handles on both sides of the aircraft. The canopy is hinged at the rear and is opened by lifting the canopy after unlatching. The internal unlock handles are directly connected to the external handles.

b. Steps are located on both sides of the aircraft fuselage in front of the wing roots. Hand holds are located on the front side of the instrument panel to assist climbing in or out of the cockpit.

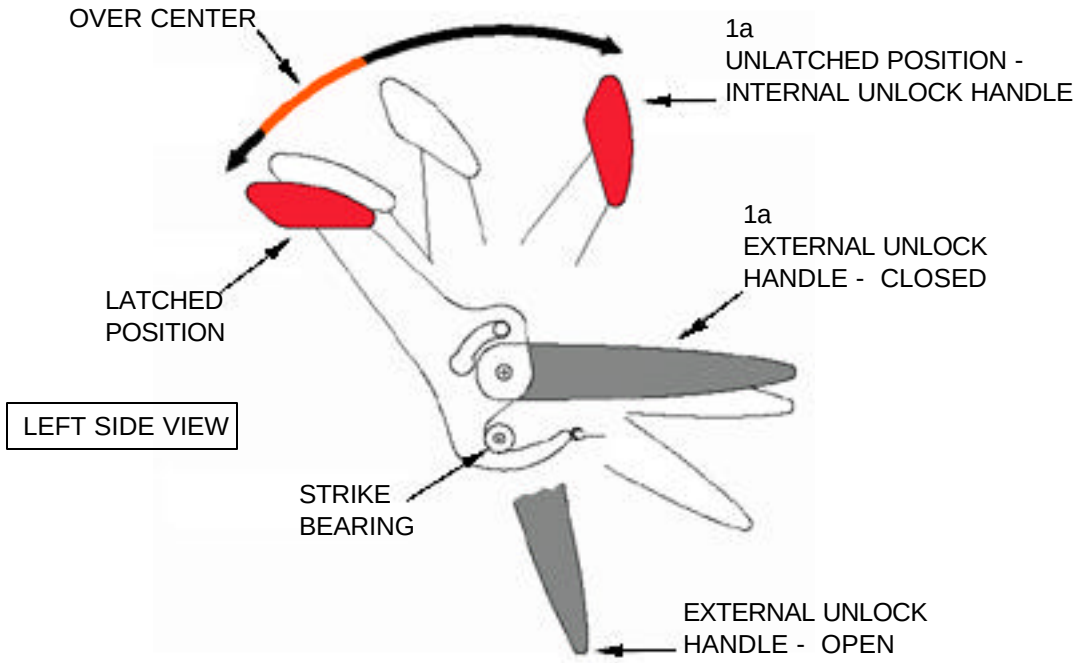
NOTE:
The stationary seats form part of the fuselage moulding and spar frame work and are fixed in an almost bench-like configuration that cradles the crew in a reclining position.

2. CUT-IN

a. If canopy fails to open, cut-in as necessary.

3. TRAINING TIPS

NOTE:
The first 20 inches outboard of the wing root is reinforced. During training protect the finish in this area with upside down carpet or similar. The wing is slippery so the carpet may need to be fixed in place. No hard sole shoes. The area outboard of this 20 inches should not be used for training, but during an emergency access over the wing, structure will remain intact.



1a
RIGHT SIDE VIEW OF UNLOCKING HANDLE

1b
STEP

ENGINE AND ELECTRICAL SHUTDOWN

1. ENGINE SHUTDOWN

a. The engine is shutdown by moving the throttle and mixture control, located on the center console, to the fully AFT position. The mixture control is colored RED.

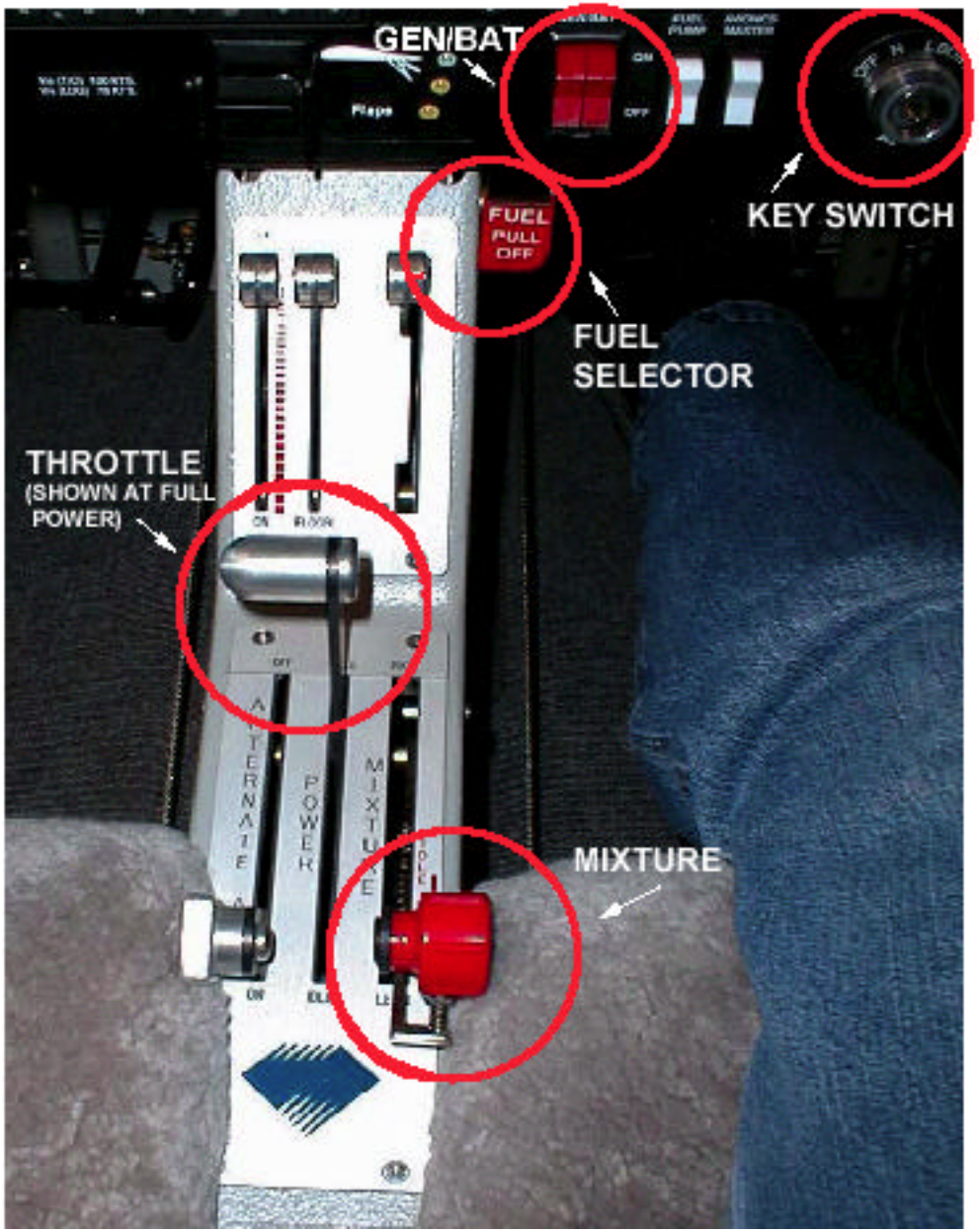
b. The key switch, located to the right of the GEN/BAT switches, is then turned counterclockwise to the OFF direction.

c. The fuel selector, located under the instrument panel beside the center console, is then pulled to the fully AFT position. Fuel selector is colored RED.

2. ELECTRICAL SHUTDOWN

a. Electrical power switch, located on the right side of instrument panel, is shutdown by placing the GEN/ BAT master switch in the OFF position. The electrical power switch is colored RED.

CENTER CONSOLE LOOKING FORWARD



ENGINE AND ELECTRICAL SHUTDOWN CONTROLS

AIRCREW EXTRACTION

1. AIRCREW EXTRACTION

NOTE:
The seats are not explosively loaded.

a. The seat arrangement is side- by- side. The pilot is located on the right side (USAF configuration only) and the student passenger is located on the left side. The seats are non-adjustable.

b. Disconnect occupants from seats by releasing the safety harness on the lap belt this will also release the shoulder portions on the harness. Both pilot and passenger seat restraints are identical.

1a
SEAT ARRANGEMENT

1b
RESTRAINT SYSTEM